

Math 153 - Quiz 2

September 4, 2014

Name key

Score _____

Show all work to receive full credit. Supply explanations when necessary.

1. (5 points) A frequency distribution is shown below.

Lengths (ft)	Frequency
4.5-8.4	2
8.5-12.4	7
12.5-16.4	5
16.5-20.4	2
20.5-24.4	1

- (a) What is the class width?

$$8.5 - 4.5 = 4$$

- (b) What are the class midpoints?

$$\frac{8.4 + 4.5}{2} = 6.45$$

$$6.45, 10.45, 14.45, 18.45, 22.45$$

- (c) If the frequency distribution was changed to a relative frequency distribution, what relative frequency would be associated with the class 12.5-16.4?

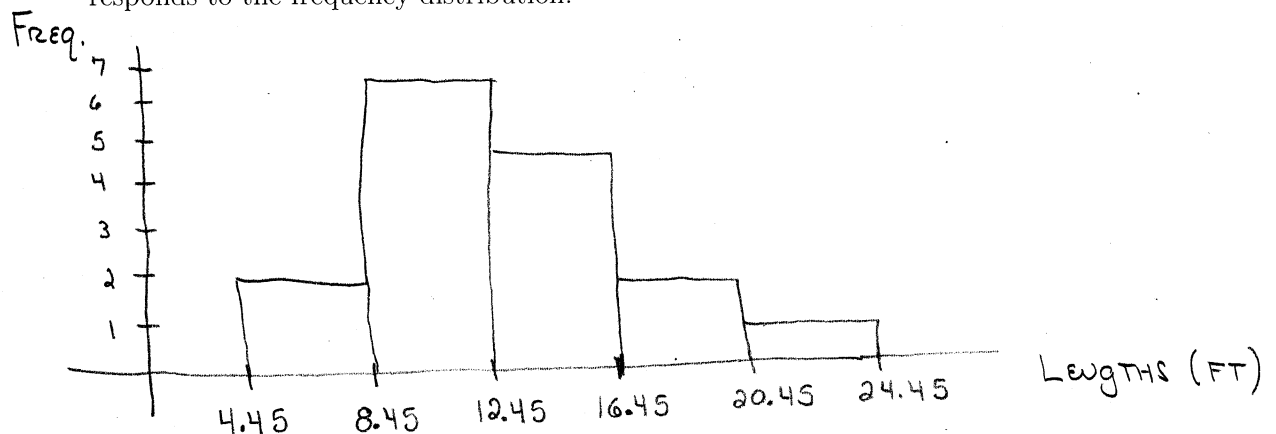
$$2 + 7 + 5 + 2 + 1 = 17$$

$$\frac{5}{17} \approx 29.4\%$$

- (d) What are the class boundaries?

$$4.45, 8.45, 12.45, 16.45, 20.45, 24.45$$

- (e) Using class boundaries along the horizontal axis, sketch the histogram that corresponds to the frequency distribution.



2. (2 points) After taking eight quizzes, Kyla's mean score was 7.75. She then scored 4 and 5 on her ninth and tenth quizzes. What is her overall mean quiz score?

$$\frac{8(7.75) + 4 + 5}{10} = \boxed{7.1}$$

3. (3 points) In the stem-and-leaf plot shown below, 2|4 stands for 24. Use the stem-and-leaf plot to answer the following questions.

1		5	6				
2		0	1	1	4	6	6
3		5	8	9			
4		0	6				
5		1	1				

- (a) How many numbers are in the sample?

$$\boxed{15}$$

- (b) What is the arithmetic mean?

$$\frac{\sum x}{15} = \frac{469}{15} = \boxed{31.\overline{26}}$$

- (c) What is the median?

$$8^{\text{TH}} \text{ NUMBER IS } \boxed{26}$$